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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,527	03/19/2004	Ulrich Bley	DP-314021	7526
22851 7590 01/18/2007 DELPHI TECHNOLOGIES, INC. M/C 480-410-202 PO BOX 5052 TROY, MI 48007			EXAMINER GELLNER, JEFFREY L	
			ART UNIT 3643	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/18/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/804,527

Applicant(s)

BLEY ET AL.

Examiner

Jeffrey L. Gellner

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3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 and 22-33 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-17, 19, 20, 22-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-17, 19, 20, 22-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butt et al. (US 5,817,972) in view of Jacob et al. (DE 19531130 A1).

As to claims 15-17, 22-25, Butt et al. disclose a method of producing gas generating mixtures (from col. 3 lines 18-30) comprising grinding (from “dry blended together” and “compacted” of col. 3 lines 18-30) a nitrogenous fuel, nitroguanidine (col. 3, lines 49-55); an oxidizing agent, potassium nitrate (col. 4 lines 4-9); and, a passivator, iron oxide (col. 4 lines 19-34), wherein a portion of the oxidizing agent acts a passivator. Not disclosed is a grain size of <20 micrometers. Jacob et al., however, discloses a mixture of nitroguanidine with iron oxide with a grain size of <20 micrometers (for example, example 2 of page 10 of translation in English). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Butt et al. by having grain size of <20 micrometers as disclosed by Jacob et al. so as to achieve the desired grain size to achieve the proper burn rate (see Butt et al. at col. 4 lines 48-53).

As to claim 19, Butt et al. as modified by Jacob et al. further disclose the passivator at from 1 to 15% wt. (Butt et al. at col. 4 lines 30-34).

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As to claims 26-28, 30, and 31, Butt et al. as modified by Jacob et al. further disclose a gas generating mixture (Butt et al. at abstract) of a nitrogen-containing fuel, nitroguanidine (Butt et al. at col. 3, lines 49-55); an oxidizing agent, potassium nitrate (Butt et al. at col. 4 lines 4-9); and, a passivator, iron oxide (Butt et al. at col. 4 lines 19-34) made from the process of claim 15.

As to claim 20, the limitations of claim 15 are disclosed as described above. Not disclosed is the grinding with a ball mill. Jacob et al., however, discloses the use of ball mill to grind a nitroguanidine with iron oxide mixture (top of page 9 of translation in English). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Butt et al. by using a ball mill as disclosed by Jacob et al. so as to use an efficient device to achieve the desired grain size.

As to claim 29, the limitations of claim 15 are disclosed as described above. Not disclosed is a grain size of 10 to 15 micrometers. Jacob et al., however, discloses a mixture of nitroguanidine with iron oxide with a grain size of 10 micrometers (example 2 of page 10 of translation in English). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Butt et al. by having grain size of 10 micrometers as disclosed by Jacob et al. so as to achieve the desired grain size to achieve the proper burn rate.

As to claims 32 and 33, Butt et al. disclose a method of producing gas generating mixtures (from col. 3 lines 18-30) comprising grinding (from “dry blended together” and “compacted” of col. 3 lines 18-30) together a nitrogenous fuel, nitroguanidine (col. 3, lines 49-55); a nitrate oxidizing agent, potassium nitrate (col. 4 lines 4-9); and, a passivating friction

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agent, iron oxide (co. 4 lines 19-34) at 1-15% wt. (col. 4 lines 30-34), to form a intimate homogeneity between the components (from “dry blended together” and “compacted” of col. 3 lines 18-30). Not disclosed the average grain size being less than 20 micrometers. Jacob et al., however, discloses a mixture of nitroguanidine with iron oxide with a grain size of <20 micrometers (for example, example 2 of page 10 of translation in English). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Butt et al. by having grain size of <20 micrometers as disclosed by Jacob et al. so as to achieve the desired grain size to achieve the proper burn rate (see Butt et al. at col. 4 lines 48-54).

Response to Arguments

Applicant's arguments filed 23 October 2006 have been fully considered but they are not persuasive. Applicants' arguments are: (1) Butt et al. does not disclose grinding because dry blending with compaction is not grinding (Remarks page 5, 2nd para.); and, (2) Butt et al. teaches away from the instant invention because its preferred embodiment is having iron oxide with a particle size greater than 100 microns (see for example the abstract) (Remarks page 6, top of page).

As to argument (1), Examiner considers dry blending with compaction to subject the particles to some amount of grinding since some of the particles would have some of their sizes reduced by either the dry blending and or compaction. In particular, dry blending would cause the particles to lose mass as they went from irregular to more regular shaped.

As to argument (2), Butt et al. does not teach away from the disclosure of iron oxide particles of less than 20 microns because of the language of col. 4 lines 48-54. Here, Butt et al.

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disclose that larger sized particles of iron oxide depress burn rate. It would be obvious then, to one of ordinary skill knowing both Butt et al. and Jacob et al. to grind the particles to achieve a desired burn rate.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Gellner whose telephone number is 571.272.6887. The examiner can normally be reached on Monday-Friday, 8:30-4:00, alternate.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 571.272.6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'J. Gellner', with a stylized flourish at the end.

Jeffrey L. Gellner
Primary Examiner
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